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Coleman

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(54) **ASSEMBLY TOOL FOR A FENCE**
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E04H 17/14 (2006.01)
(52) **U.S. Cl.**
CPC **E04H 17/26** (2013.01); **E04H 17/1413** (2013.01)

(58) **Field of Classification Search**
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See application file for complete search history.

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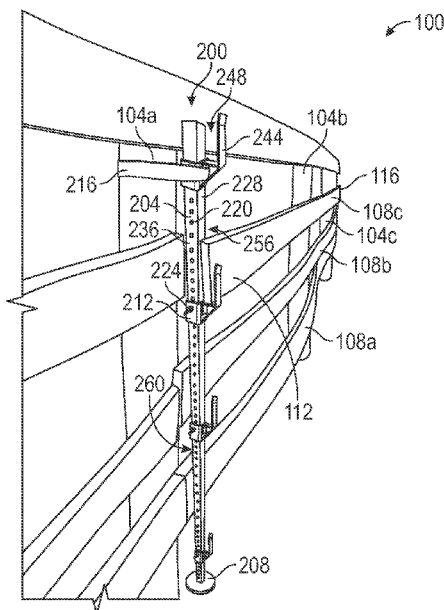
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(57) **ABSTRACT**

A fence assembly tool is provided. The fence assembly tool may be an auxiliary tool that is removably coupled to a first fence post, to assist an individual in assembling fences. Specifically, the fence assembly tool may include an elongate body that includes one or more brackets extending therefrom. Each of the one or more brackets may be adapted to receive a first end of a cross member of a fence assembly. A second opposing end of the cross member may then be coupled to a second fence post while remaining supported at the first end by the assembly tool. This process may be repeated for multiple cross members as needed, thereby allowing a user to assemble or repair a fence without assistance from others.

20 Claims, 14 Drawing Sheets



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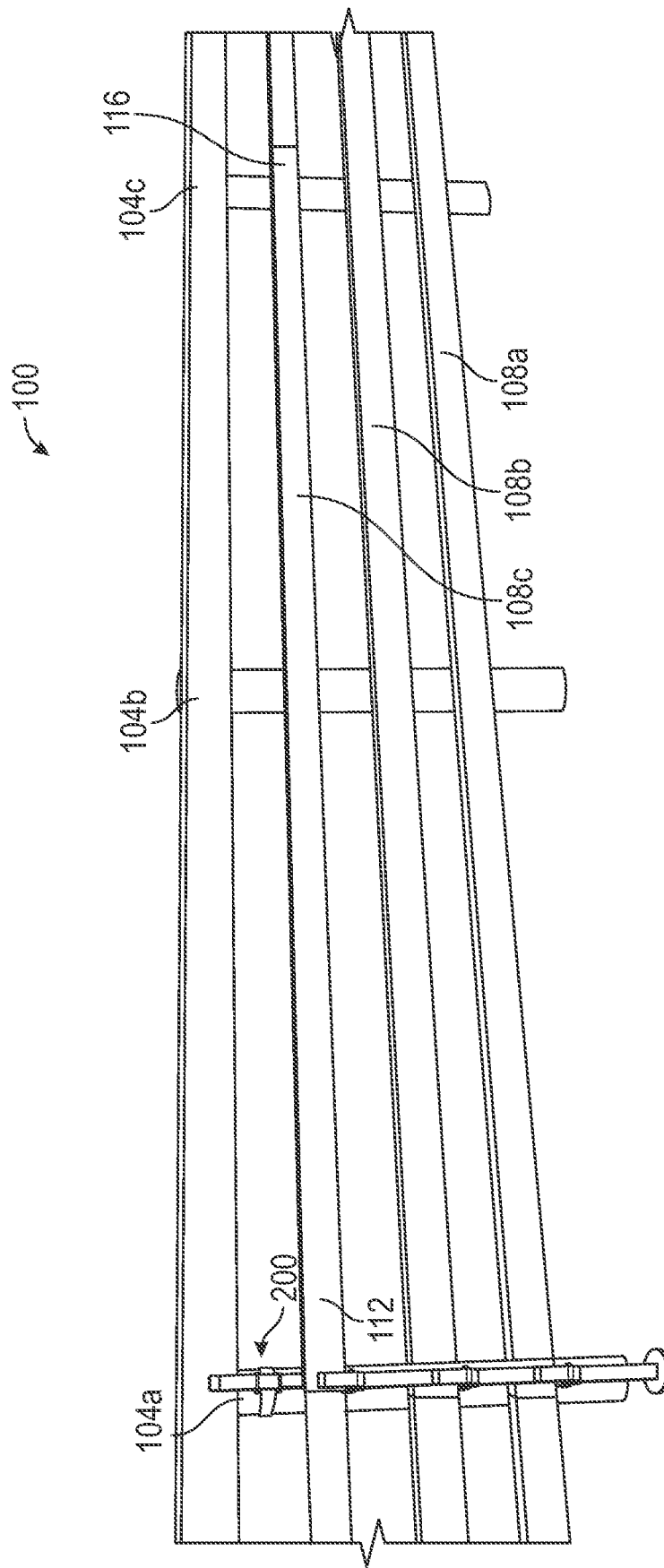


FIG. 1

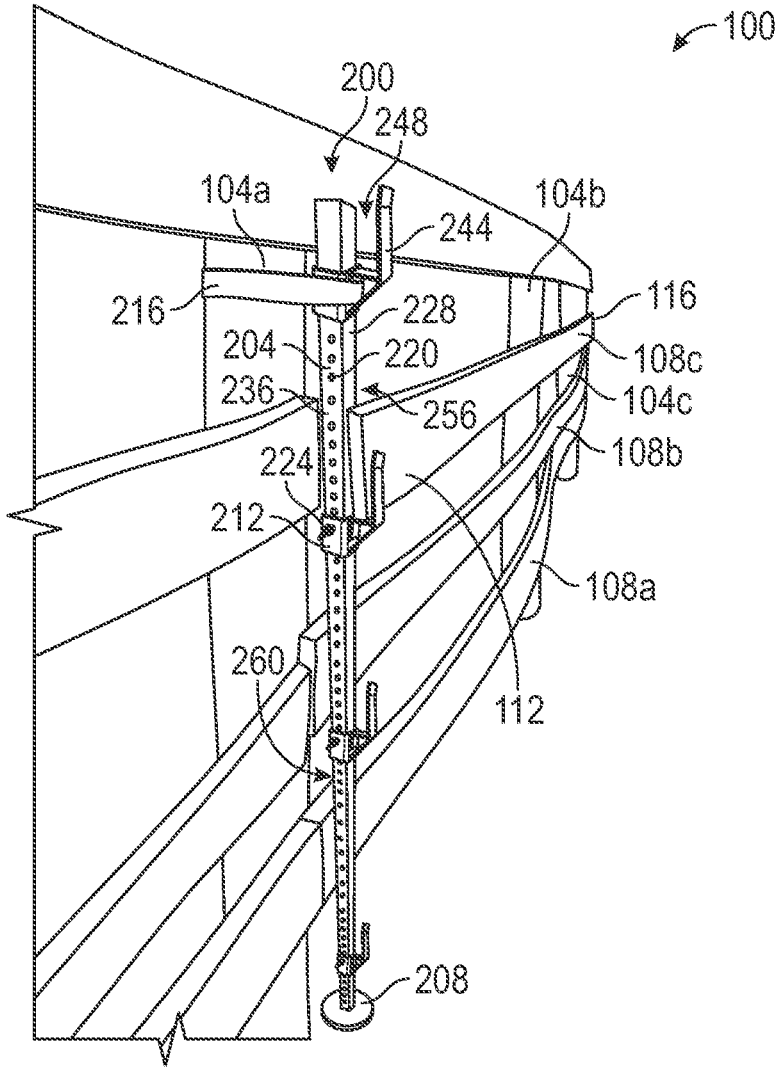


FIG. 2

100

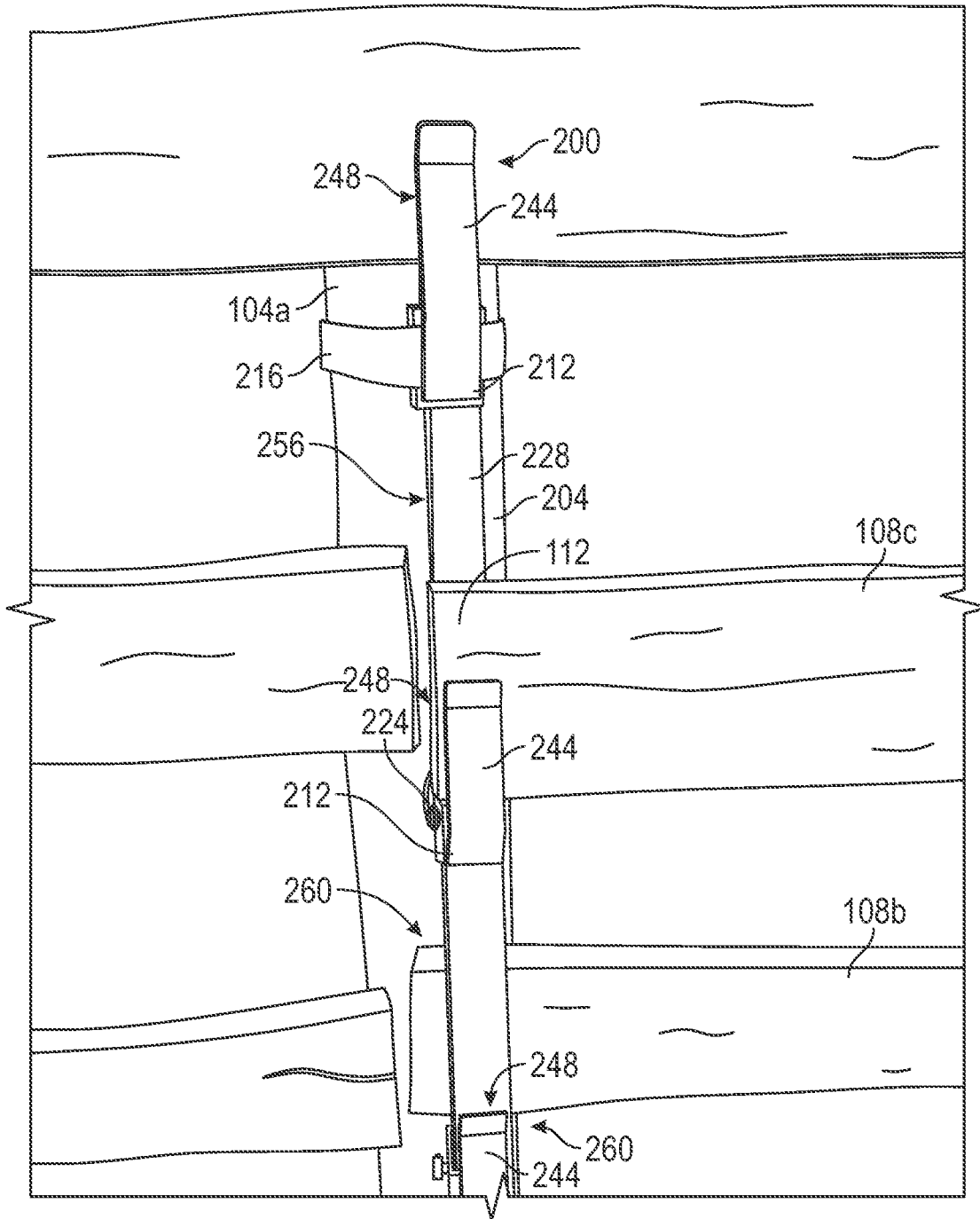


FIG. 3

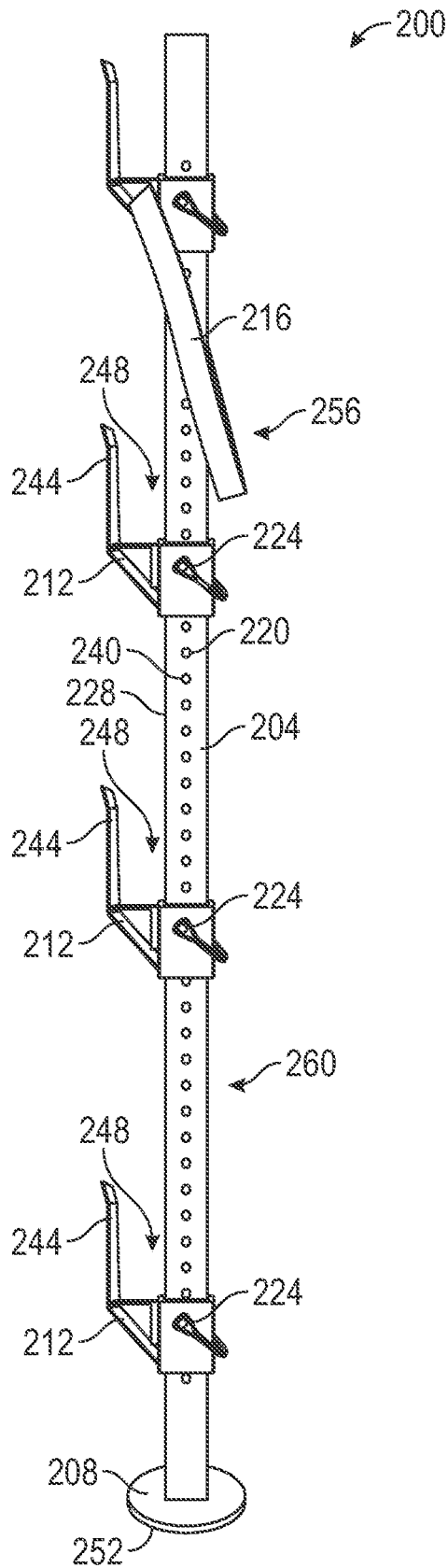


FIG. 4

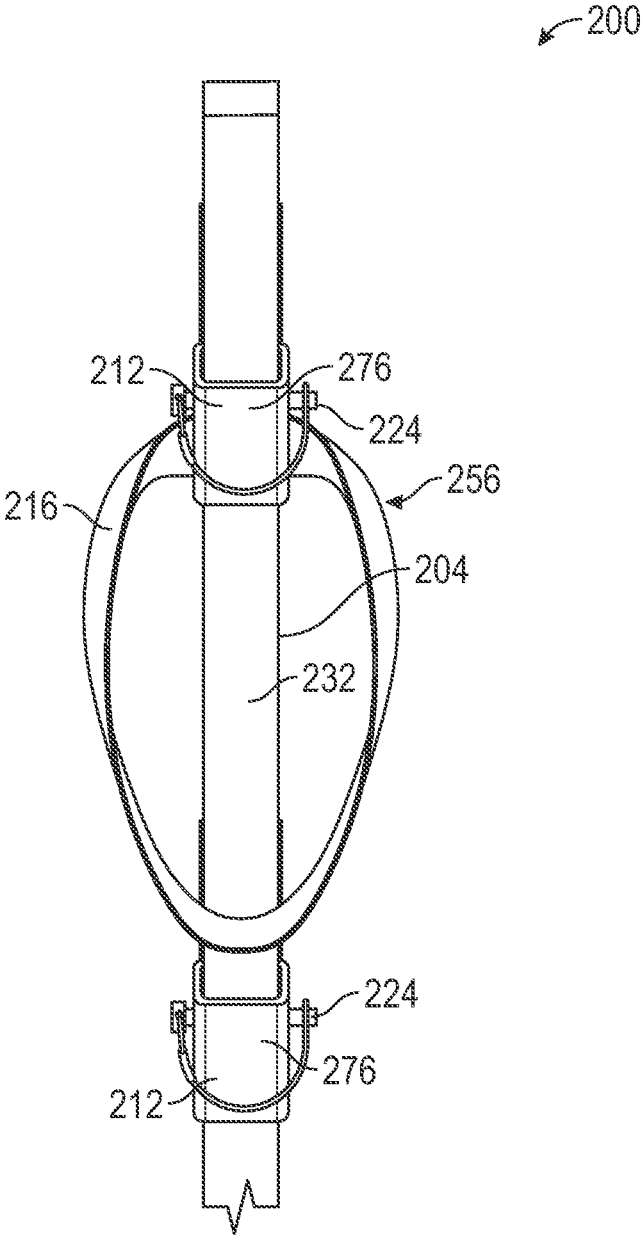


FIG. 5

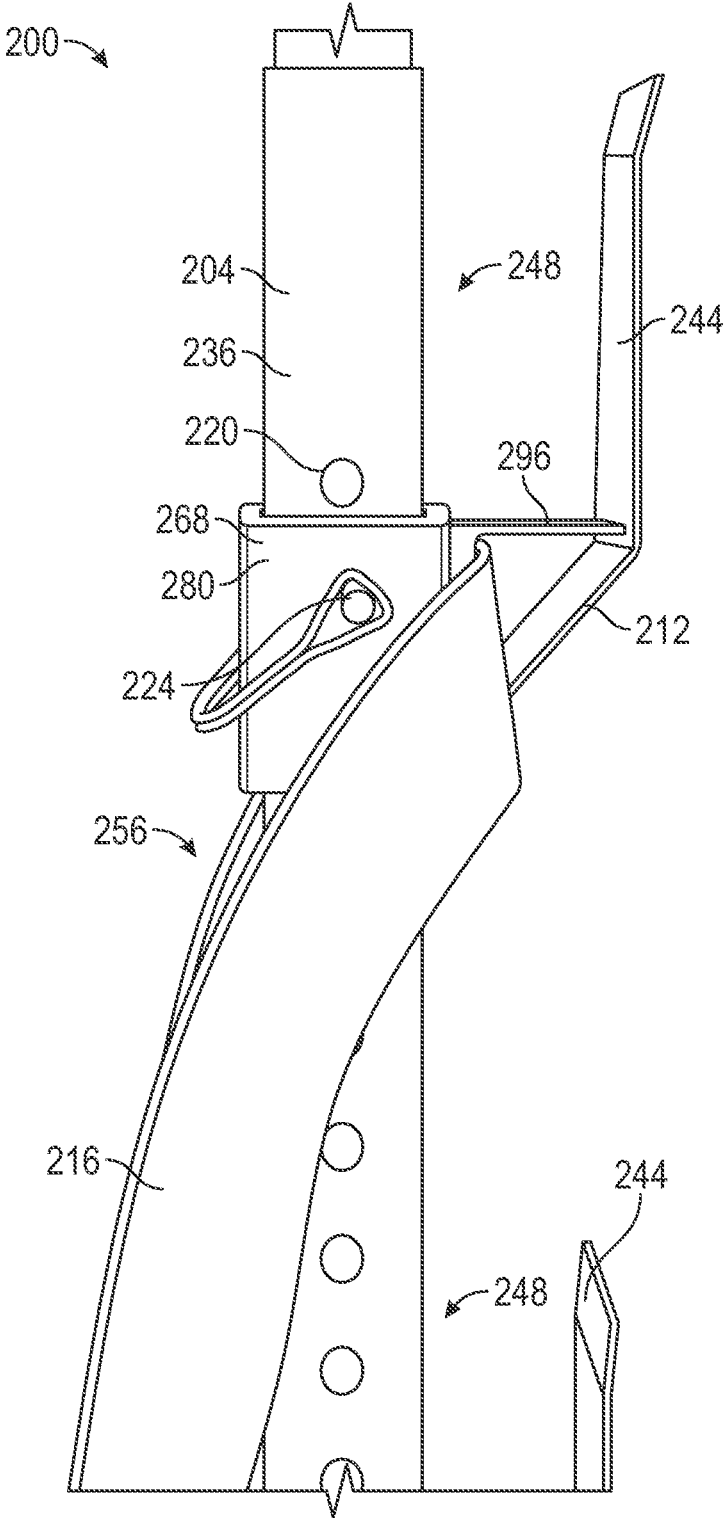


FIG. 6

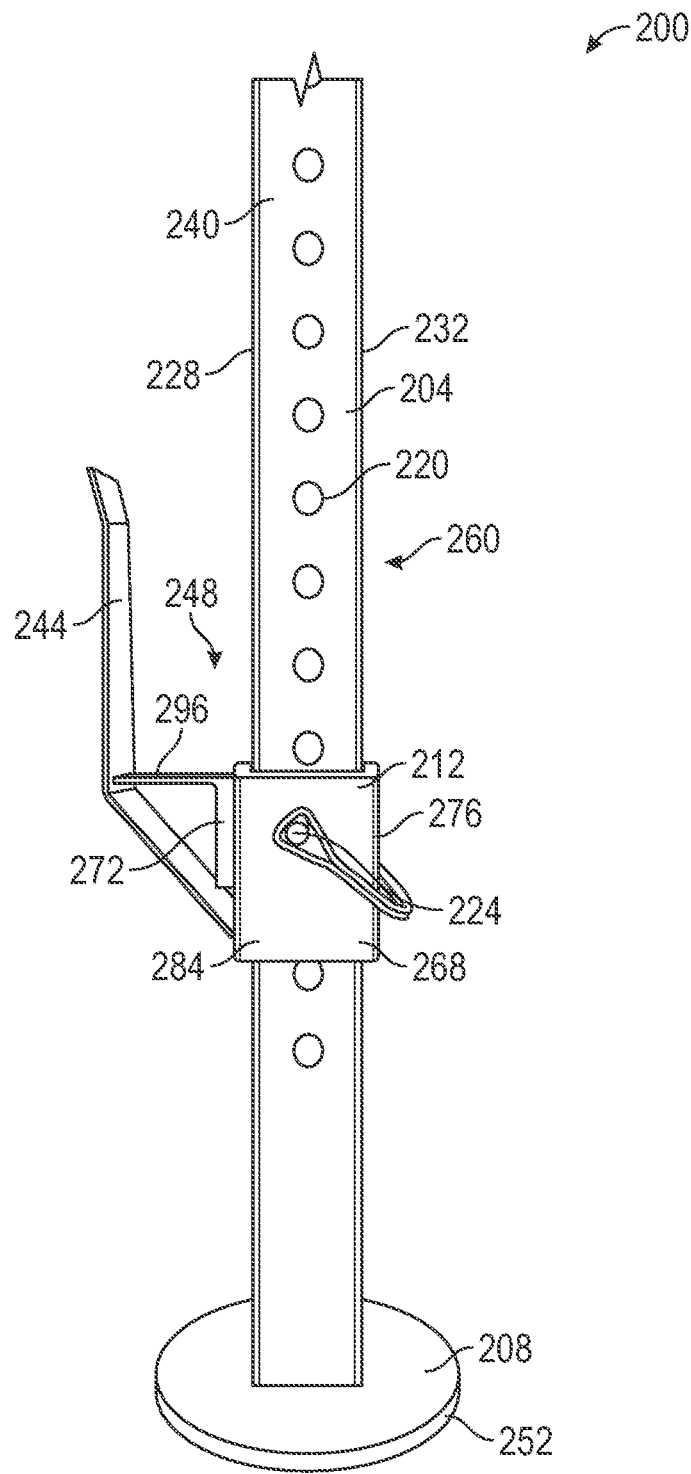


FIG. 8

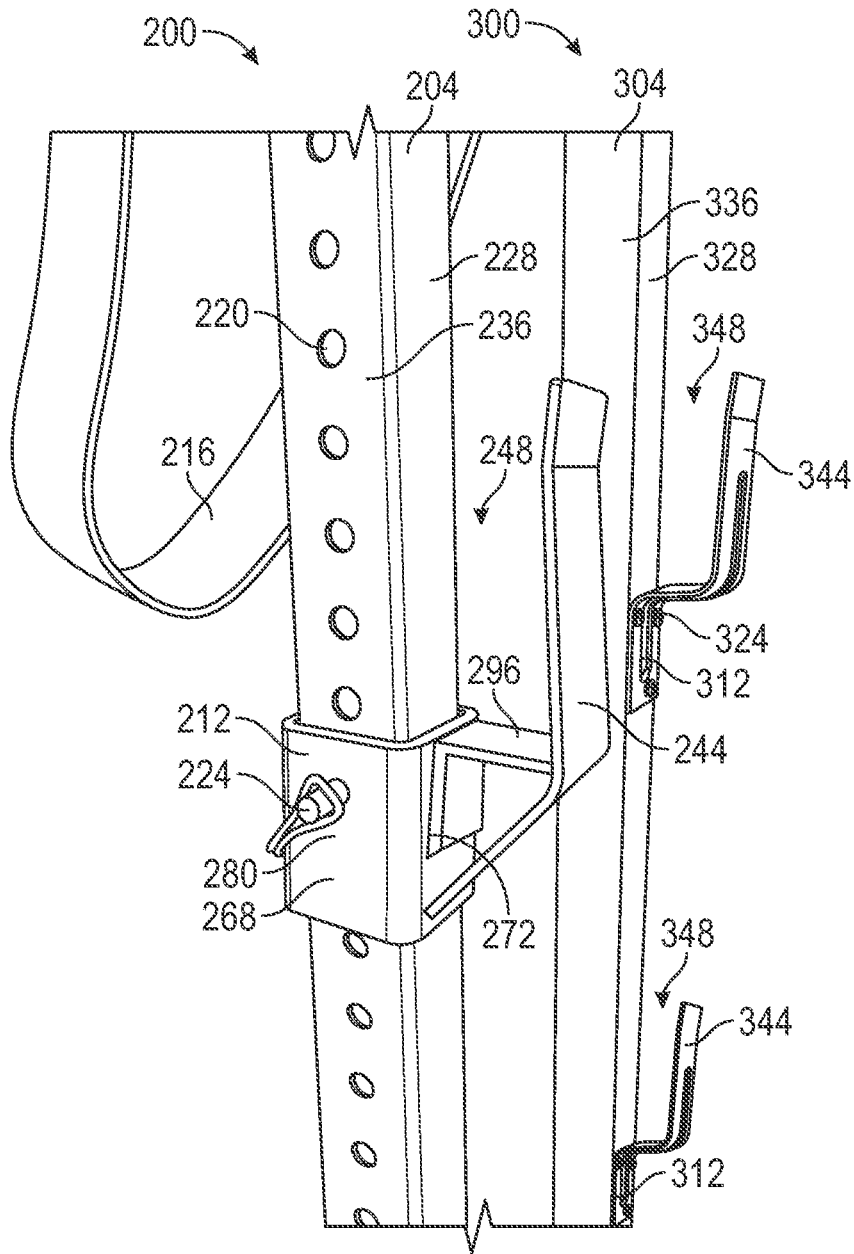


FIG. 9

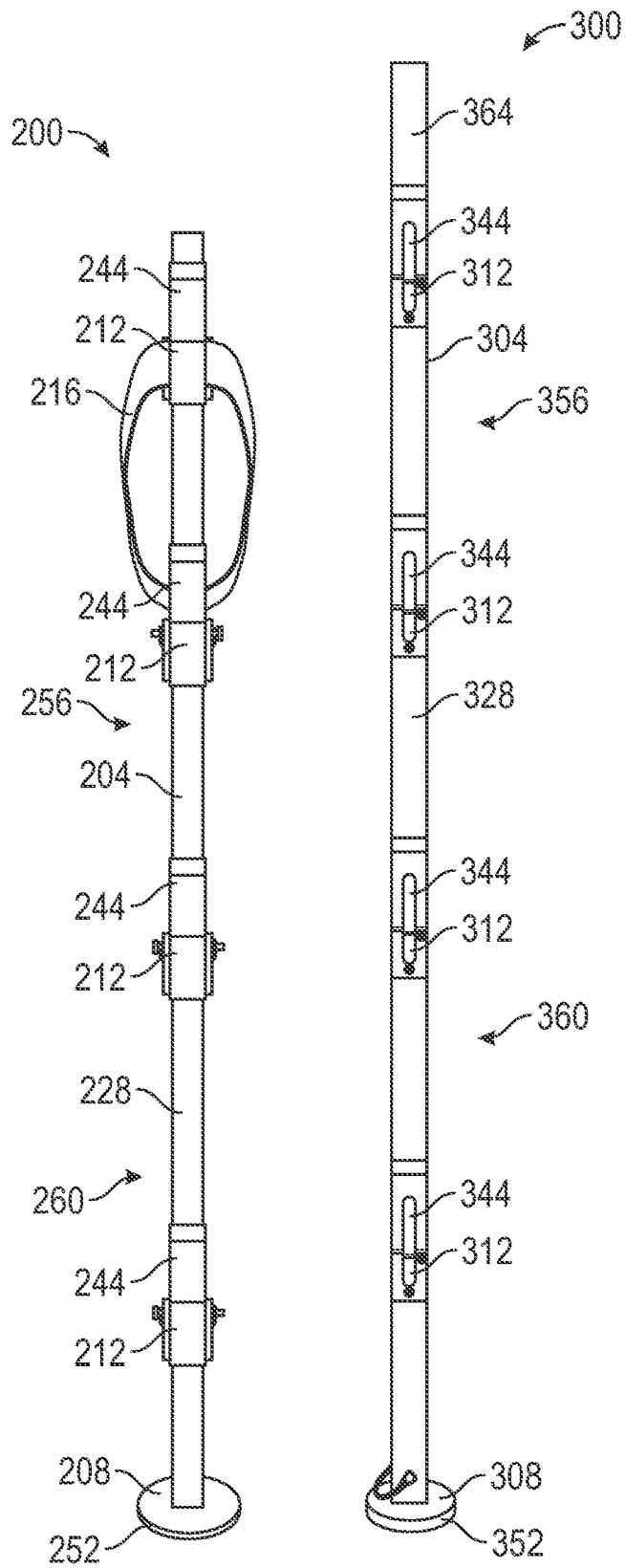


FIG. 10

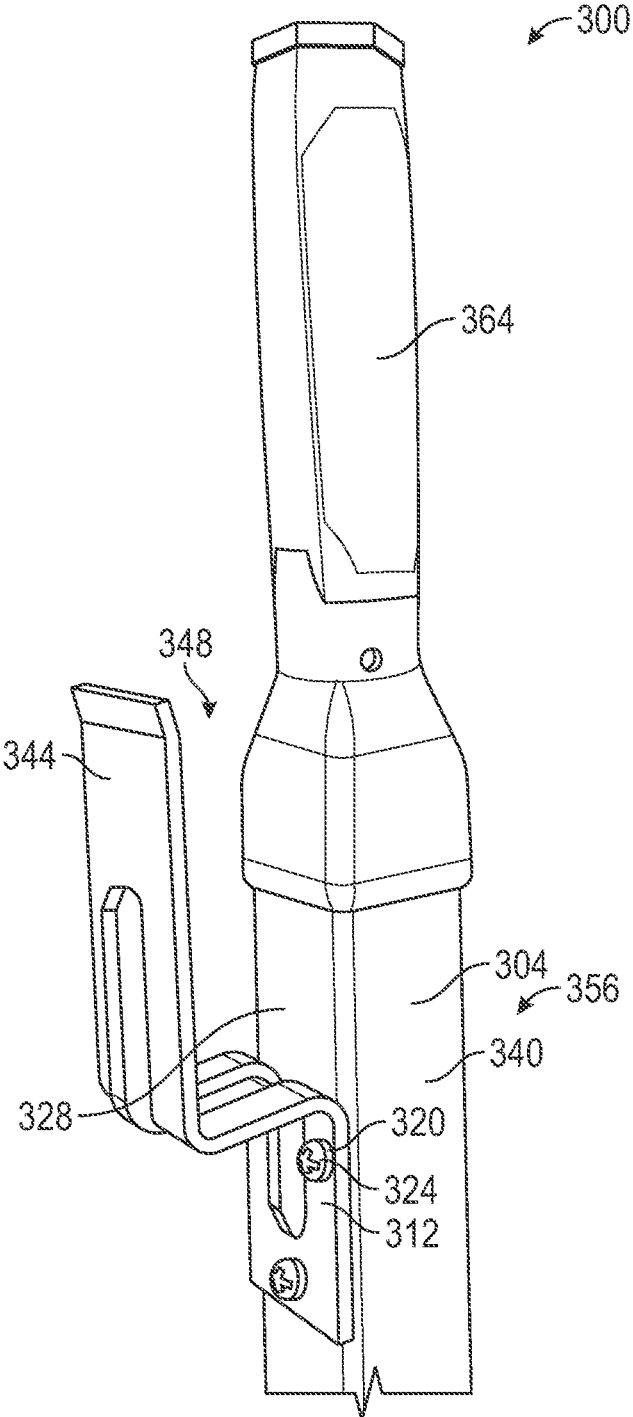


FIG. 11

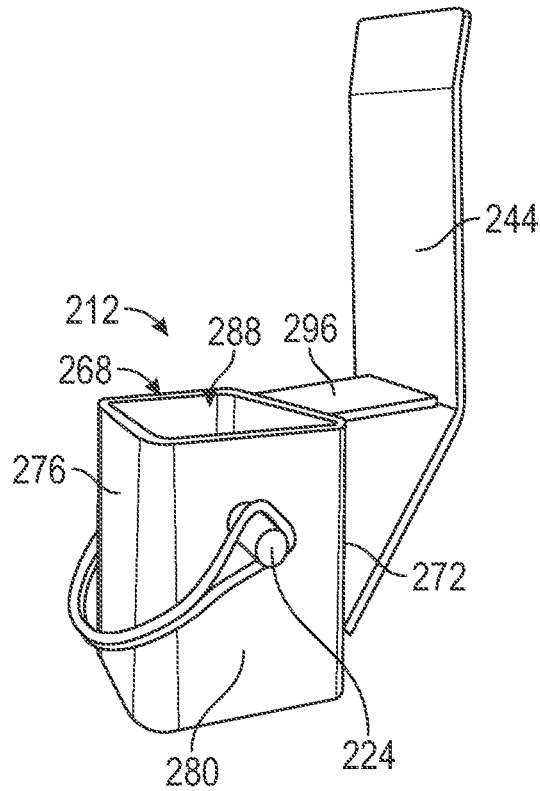


FIG. 12

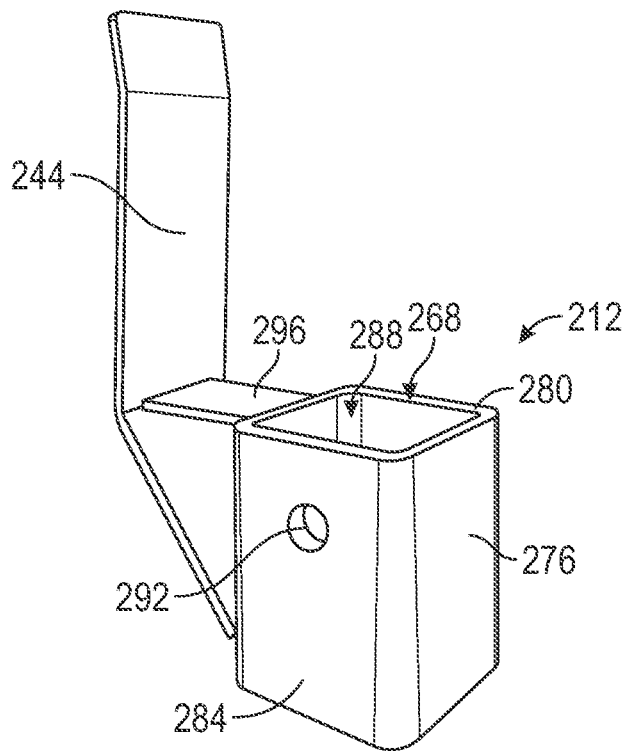


FIG. 13

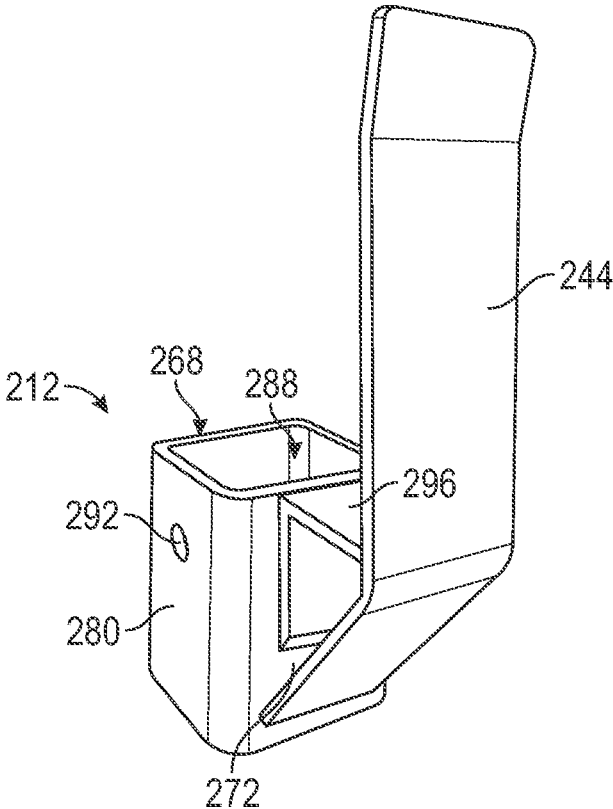


FIG. 14

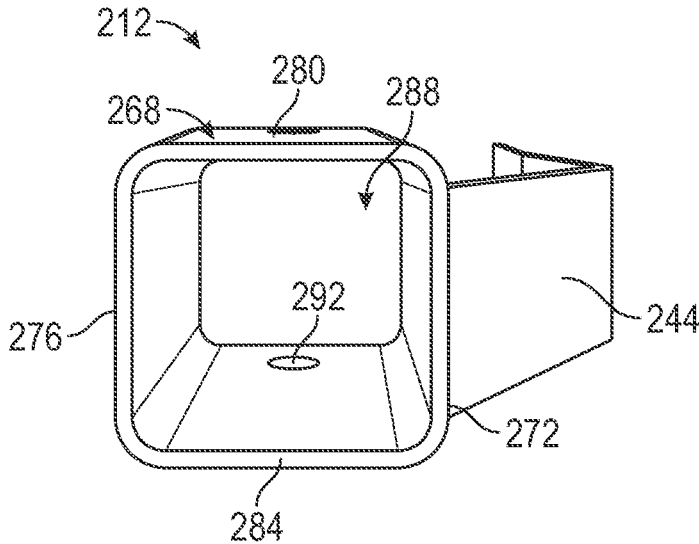


FIG. 15

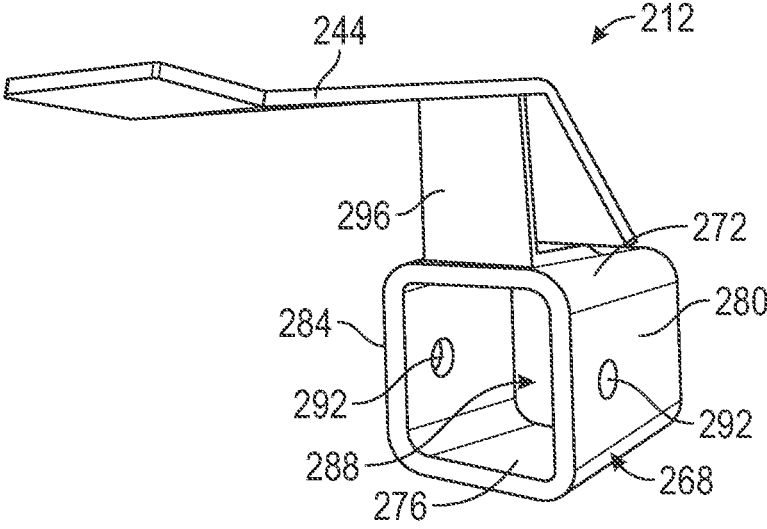


FIG. 16

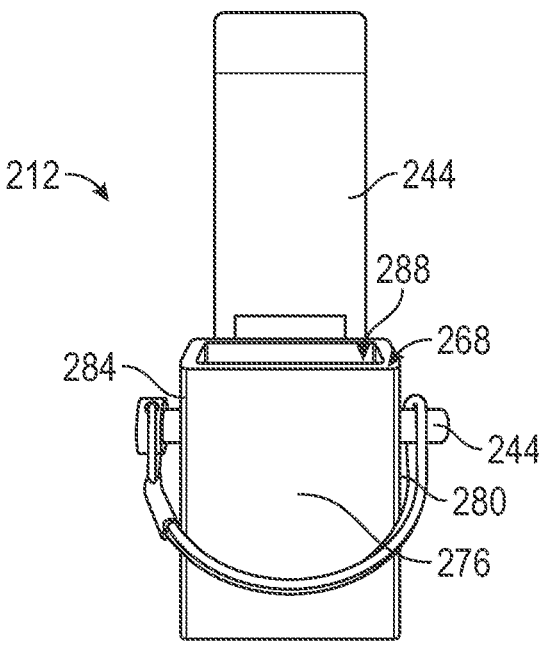


FIG. 17

ASSEMBLY TOOL FOR A FENCE

BACKGROUND

Fences may be used in a variety of contexts. In some examples, fences may include a plurality of fence posts, such as a first fence post and a second fence post. The fences may further include cross members that extend from the first fence post to the second fence post, after being coupled thereto.

SUMMARY

Aspects of the present disclosure relate generally to a fence assembly tool. The fence assembly tool may be an auxiliary tool that is removably coupled to a first fence post, to assist an individual in assembling fences. Specifically, the fence assembly tool may include an elongate body that includes one or more brackets extending therefrom. Each of the one or more brackets may be adapted to receive a first end of a cross member of a fence assembly. A second opposing end of the cross member may then be coupled to a second fence post while remaining supported at the first end by the assembly tool. This process may be repeated for multiple cross members as needed, thereby allowing a user to assemble or repair a fence without assistance from others.

In some examples an assembly tool for a fence is provided. The assembly tool includes an elongate body, a base, and one or more brackets that extend from the elongate body. The base is attached to the elongate body. Each of the one or more brackets are sized and configured to receive a corresponding one of one or more cross members of a fence assembly.

In some examples, an assembly tool is provided. The assembly tool includes an elongate body, a handle, and one or more brackets. The handle extends from the elongate body. The one or more brackets extend from the elongate body. Further, each of the one or more brackets are sized and configured to receive a corresponding one of one or more cross members of a fence assembly.

In some examples, an assembly tool is provided. The assembly tool includes an elongate body, a strap, and one or more brackets. The strap is coupled to the elongate body, and the strap is configured to removably couple the elongate body to a fence post. The one or more brackets extend from the elongate body. Further, each of the one or more brackets are adapted to receive a corresponding one of one or more cross members of a fence assembly.

In some examples, a height of each of the one or more brackets are adjustable, along the elongate body, with respect to the base.

In some examples, the elongate body is made from one of metal, wood, or plastic.

In some examples, the base is integrally attached to the elongate body.

In some examples, the one or more brackets are coupled to the elongate body, via one or more fasteners.

In some examples, the elongate body includes a plurality of holes that extend therethrough. Each of the plurality of holes are configured to receive one or more fasteners to secure the one or more brackets to the elongate body.

In some examples, the elongate body is substantially hollow.

In some examples, the one or more brackets include a plurality of brackets that are each adapted to receive a corresponding one of a plurality of cross members of a fence assembly.

In some examples, the elongate body includes a first face and a second face. The first face and the second face are laterally opposed on the elongate body, and the one or more brackets each define a flange that extends outward from the first face.

In some examples, each of the one or more flanges define, in combination with the elongate body, an elongate pocket.

In some examples, a method for assembling a fence, using the assembly tool, is provided. The method includes: coupling the assembly tool to a first fence post, inserting a first end of one of the one or more cross members into a first elongate pocket of the one or more elongate pockets, coupling a second end of the one or more cross members to a second fence post, de-coupling the assembly tool from the first fence post, and coupling the first end of the one of the one or more cross members to the first fence post.

In some examples, the assembly tool further includes a strap. The strap is coupled to the elongate body, and the strap is configured to removably couple the elongate body to a fence post.

In some examples, the strap is one of a cinch strap or a fabric strap with hook-and-loop fasteners.

In some examples, the assembly tool further includes a handle. The handle extends from the elongate body, opposite of the base.

In some examples, a height from the base to the handle is between about 4 feet and about 6 feet.

This summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter. Additional aspects, features, and/or advantages of examples will be set forth in part in the following description and, in part, will be apparent from the description, or may be learned by practice of the disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

The above mentioned and other features of this invention, and the manner of attaining them, will become more apparent and the invention itself will be better understood by reference to the following description of embodiments of the invention taken in conjunction with the accompanying drawings, where:

FIG. 1 illustrates a front perspective view of a fence assembly being assembled, using an assembly tool, according to some aspects described herein.

FIG. 2 illustrates a front, right-side perspective view of a fence assembly being assembled, using the assembly tool of FIG. 1, according to some aspects described herein.

FIG. 3 illustrates a front perspective view of a portion of a fence assembly being assembled, using the assembly tool of FIG. 1, according to some aspects described herein.

FIG. 4 illustrates a left-side perspective view of the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 5 illustrates a rear perspective view of a portion of the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 6 illustrates a right-side perspective view of a portion of the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 7 illustrates a left-side perspective view of a portion of the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 8 illustrates a left-side perspective view of a portion of the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 9 illustrates a front, right-side perspective view of a portion of the first fence assembly tool of FIG. 1 and a portion of a second fence assembly tool, according to some aspects described herein.

FIG. 10 illustrates a front perspective view of the first fence assembly tool and the second fence assembly tool of FIG. 9, according to some aspects described herein.

FIG. 11 illustrates a front, left-side perspective view of a portion of the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 12 illustrates a top, rear, and right-side view of a bracket for the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 13 illustrates a top, rear, and left-side view of a bracket for the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 14 illustrates a top, front, and right-side view of a bracket for the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 15 illustrates a bottom perspective view of a bracket for the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 16 illustrates a top, right-side view of a bracket for the fence assembly tool of FIG. 1, according to some aspects described herein.

FIG. 17 illustrates a front perspective view of a bracket for the fence assembly tool of FIG. 1, according to some aspects described herein.

Corresponding reference characters may indicate corresponding parts throughout the several views. Unless stated otherwise the drawings are proportional and drawn to scale.

DETAILED DESCRIPTION OF THE DRAWINGS

It is to be understood that the phraseology and terminology used herein is for the purpose of description and should not be regarded as limiting. The use of “including,” “comprising,” or “having” and variations thereof herein is meant to encompass the items listed thereafter and equivalents thereof as well as additional items. Unless specified or limited otherwise, the terms “mounted,” “connected,” “supported,” and “coupled” and variations thereof are used broadly and encompass both direct and indirect mountings, connections, supports, and couplings. Further, “connected” and “coupled” are not restricted to physical or mechanical connections or couplings.

While the structures and components disclosed herein may be embodied in many different forms, several specific embodiments are discussed herein with the understanding that the embodiments described in the present disclosure are to be considered only exemplifications of the principles described herein, and the disclosure is not intended to be limited to the embodiments illustrated. Further, throughout the disclosure, the terms “about”, “substantially”, and “approximately” mean plus or minus 5% of the number or geometric constraint that each term precedes. For example, about 100 may mean 100+/-5. Additionally, or alternatively, substantially orthogonal may mean that any 90 degree angle related to the described orthogonality may be between 85.5 degrees and 94.5 degrees (inclusive).

Fences may be used in a variety of contexts. For example, fences may be used to define boundaries of a person's property. Additionally, or alternatively, fences may be used to keep-in or keep-out various forms of life (e.g., wild

animals, farm animals, domestic animals, humans, etc.). Additionally, or alternatively, fences may be used for aesthetic appeal, such as, for example, in the form of the iconic white picket fence that is often tied to the American Dream, the same American Dream that promotes innovation and ingenuity, as may be exemplified by mechanisms described herein.

In many instances, fences may contribute to fundamental rights with which a person is endowed. As a first example, fences may provide individuals with protection (e.g., to protect life), such as from trespassers or wildlife. As a second example, fences may provide individuals with privacy (e.g., one of many liberties), such as from neighbors or travelers. Further, fences may improve a person's quality of life (e.g., for a person's own pursuit of happiness), with ornamental designs that help to beautify a person's property.

However, fences can be difficult to assemble. In some examples, fences may include cross members that extend from a first fence post to a second fence post. The cross members may be as long as, or in some instances even longer than, 16 feet. An installer is unable to hold up both ends of a cross member (e.g., a 16-foot long cross member) to couple the cross member to both a first fence post and a second fence post. Therefore, two people may be needed to assemble most fences. A first person may couple a first end of the cross member to the first fence post, while a second person couples a second end of the cross member to the second fence post. Unfortunately, it may be difficult, if not impossible, for a person to assemble a fence, by coupling cross members to fence posts, by themselves.

Accordingly, there exists a need for an auxiliary tool that individuals can use to assemble fences (e.g., couple cross members across fence posts), relatively easily, by themselves. Further, to accommodate a diversity of fences, there exists a need for an auxiliary tool that can be used to assemble cross members with varying heights. Further, there exists a need for an auxiliary tool that an individual can use to hold a cross member with enough stability for the individual to trim the cross member easily and safely (e.g., with a saw, such as a hand saw), if needed.

Aspects of the present disclosure can be advantageous to address the above problems, as well as additional problems that may be recognized by those of ordinary skill in the art. Although relatively specific problems may have been discussed, it should be understood that the embodiments should not be limited to solving the specific problems identified herein.

Generally, as explained further herein, the present disclosure provides a fence assembly tool. The fence assembly tool includes an elongate body and one or more brackets extending from the elongate body. Each of the one or more brackets are adapted to receive one or more corresponding cross members of a fence assembly. In some examples, the fence assembly tool further includes a base. The base is attached to the elongate body. In some examples, the fence assembly tool further includes a handle. The handle extends from the elongate body. Further, in some examples, the fence assembly tool further includes a strap. The strap can be coupled to the elongate body, and the strap can be configured to removably couple the elongate body to a fence post.

Aspects of the fence assembly tool described herein provide the ability for a person to easily couple a cross member from a first fence post to a second fence post, by themselves. Further, aspects of the fence assembly tool provide a sturdy and stable structure for holding a cross member, such that the cross member can be easily trimmed by a person (e.g., with a saw, such as a hand saw), if needed,

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by themselves. Further advantages of the fence assembly tool described herein may be recognized by those of ordinary skill in the art, at least in light of the teachings included herein.

FIG. 1 illustrates a front perspective view of a fence assembly 100 being assembled, using an assembly tool or fence assembly tool or tool 200. In the example of FIG. 1, the fence assembly 100 includes a plurality of posts 104, such as a first post 104a, a second post 104b, and a third post 104c. The fence assembly 100 further includes one or more cross members 108, such as a first cross member 108a, a second cross member 108b, and a third cross member 108c. Each of the one or more cross members 108 may have a first end 112 and a second end 116. The first end 112 may be opposite to the second end 116. In other words, the first end 112 and the second end 116 may be laterally opposed.

The fence assembly tool 200 may be removably coupled to the first post 104a. The fence assembly tool 200 may be removably coupled using mechanisms described herein and/or using mechanisms that may be recognized by those of ordinary skill in the art. The third cross member 108c, as shown in FIG. 1, may be coupled to one or more of the one or more posts 104 (e.g., the second post 104b and the third post 104c), using the fence assembly tool 200. The first end 112 of the third cross member 108c may be received by the fence assembly tool 200. Therefore, one or more aspects of the fence assembly tool 200 may be configured, adapted, and/or dimensioned to receive one or more of the one or more cross members 108. Further, the second end 116 of the third cross member 108c may be coupled to an adjacent one of the other posts (e.g., the second post 104b or the third post 104c).

After coupling the second end 116 of the third cross member 108c to one the posts 104, the cross member 108c may also be coupled to any intermediate posts 104 positioned along its length (e.g., post 104b shown in FIG. 1). The fence assembly tool 200 may then be de-coupled from the first post 104a and/or removed from the third cross member 108c. The first end 112 of the third cross member 108c may then be coupled to the first post 104a. Additionally, or alternatively, while the third cross member 108c is being held by the fence assembly tool 200, a person may be able to trim a length of the third cross member 108c, such as, for example with a saw.

Generally, the fence assembly tool 200 allows for one or more cross members to be assembled (e.g., coupled) with one or more fence posts, by a single person. Therefore, the fence assembly tool 200 eases assembly of fence assemblies (e.g., fence assembly 100) for independent individuals. Further, the fence assembly tool 200 provides a sturdy and stable structure for holding a cross member (e.g., the third cross member 108c), such that the cross member can be easily trimmed by a person (e.g., with a saw, such as a hand saw), if needed, by themselves. Further advantages of the fence assembly tool described herein may be recognized by those of ordinary skill in the art, at least in light of the teachings included herein.

FIGS. 2 and 3 illustrate additional views of the fence assembly 100 being assembled, using the fence assembly tool 200. As shown in FIG. 2, the fence assembly tool 200 includes an elongate body 204, a base 208, one or more brackets 212, and/or a strap 216.

The elongate body 204 may generally form a rectangular prism. Alternatively, the elongate body 204 may generally form a cylinder or bar, or another elongated volumetric shape that may be recognized by those of ordinary skill in the art. Additionally, and/or alternatively, the elongate body

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204 may be hollow, along at least a portion of a length of the elongate body 204. Alternatively, the elongate body 204 may be substantially hollow (e.g., hollow along a first length of the elongate body 204 that is greater than a second length of the elongate body 204, along which the elongate body 204 is not hollow). In some examples, the elongate body 204 may be hollow along an entire length of the elongate body 204. In some examples, an advantage of the fence assembly tool 200 is that individuals may be able to use the tool 200 to assemble fences, by themselves. Therefore, it may be beneficial for the elongate body 204 to be hollow, to reduce weight for an individual who is carrying the tool 200 (e.g., outdoors, for long periods of time, and/or over long distances), to assemble fences, by themselves.

In one embodiment, the elongate body 204 may be made from a rigid material such as one of metal, wood, or plastic. Additionally, and/or alternatively, the elongate body 204 may be made from a composite material that combines at least one or more from the group of metal, wood, and plastic. The rigidity of the material for body 204 may be sufficient to support the weight of a cross member 108 (FIG. 1) with minimal deflection and/or deformation, such a total deflection of less than 1 inch, for example. Any such deflection may be elastically recoverable, i.e., the body 204 reverts from its deflected shape to its original shape when the weight is removed. Further, the elongate body 204 may include a plurality of holes 220 extending therethrough. Each of the plurality of holes 220 may be configured to receive one or more fasteners 224 to secure the one or more brackets 212 to the elongate body 204, as further detailed below.

In some examples, the one or more fasteners 224 may each be one or more pins, such as cotter pins, that extend through a respective one of the one or more brackets 212, and corresponding holes 220. Thus, a fastener 224 couples each of the one or more brackets 212 to the elongate body 204. Additionally, or alternatively, the one or more fasteners 224 may be screws and/or bolts that couple each of the one or more brackets 212 to the elongate body 204. Additionally, or alternatively, the one or more brackets may be otherwise coupled to the elongate body 204, such as, for example, via adhesion, welding, molding, or other attachment mechanisms that may be recognized by those of ordinary skill in the art.

The plurality of holes 220 may be equally spaced apart along a length of the elongate body 204. For example, the plurality of holes 220 may be spaced apart at a distance of between about one inch and about two inches. Additionally, or alternatively, the plurality of holes 220 may be spaced apart at configurable distances, with respect to each other, that are determined to be preferable for a user of the fence assembly tool 200. One of ordinary skill in the art may recognize that vertical spacing between a first cross member of a fence assembly and a second cross member of the fence assembly can vary depending on a number of cross members that are coupled to the fence assembly, thereby impacting a distance at which the plurality of holes 220 may be spaced apart to position the brackets 212 along the elongate body 204.

In some examples, fence assemblies may have only a single cross member extending between a first post and a second post, whereas in alternative examples, fence assemblies may have two cross members, or three cross members, or four cross members, or five cross members, or any number of cross members. On a conventional five-foot tall fence, there may be four cross members that are vertically spaced apart a distance of between about 10 inches and about 12 inches. However, if five-foot tall fence includes,

instead, only three cross members, then the three cross members may be vertically spaced apart a distance of greater than about 12 inches. Fence assemblies that include only three cross members may be about four-feet tall (e.g., as measured from a ground to a top of a post of the fence assembly to/from which the three cross members extend), whereas fence assemblies that include only five cross members may be about six-feet tall (e.g., as measured from a ground to a top of a post of the fence assembly to/from which the five cross members extend).

The one or more brackets **212** may be coupled to the elongate body **204**, via the one or more fasteners **224**. A height of each of the one or more brackets **212** is adjustable, along the elongate body, with respect to the base **208**. For example, a user of the fence assembly tool **200** may configure a height of each of the one or more brackets **212** to correspond to a desired height of a respective one or more cross members (e.g., cross members **108**) of a fence assembly (e.g., fence assembly **100**). Further, the one or more brackets **212** may comprise a plurality of brackets **212** that are each adapted to receive a corresponding one of a plurality of cross members (e.g., cross members **108**) of a fence assembly (e.g., fence assembly **100**).

The elongate body **204** includes a first face or front face **228** (FIG. 3) and a second face or rear face **232** (FIG. 5). The first face **228** and the second face **232** are laterally opposed on the elongate body **204**. The elongate body **204** further includes a third face or right face **236** (FIG. 6) and a fourth face or left face **240** (FIG. 4) that each extend between the first face **228** and the second face **232**, on opposite sides of the elongate body **204**. In some examples, the third face **236** and the fourth face **240** may extend substantially orthogonal between the first face **228** and the second face **232** to create a square or rectangular cross-section. The one or more brackets **212** each define a flange **244** (thereby, collectively, defining one or more flanges **244**) that extends outward from the first face **228**. Each of the one or more flanges **244** define, in combination with the elongate body **204**, an elongate pocket **248** sized and configured to receive a cross member **108**.

The one or more elongate pockets **248** may each receive the one or more cross members **108** (e.g., at the first end **112**), when the fence assembly tool **200** is being used to assemble a fence. Therefore, the one or more brackets **212** may each be adapted to receive a corresponding one of the one or more cross members **108**, within the elongate pocket **248**. The one or more flanges **244** may curve away from, or otherwise extend away from, the elongate body **204** to form the elongate pocket **248**. Accordingly, a face of each of the one or more flanges **244** may be spaced apart from the first face **228** of the elongate body **204** at a distance that is great enough to receive a thickness of a cross member of a fence assembly (e.g., one or more of the cross members **108** of the fence assembly **100**).

FIGS. 4-8 illustrates additional views of the fence assembly tool **200**, having been removed from the fence assembly **100**. A height of the fence assembly tool **200** may be measured from the base **208** (e.g., a geometric center point of the base **208**) to an end of the elongate body **204** that is furthest from the base **208**. The height of the fence assembly tool **200** may be between about 4 feet and about 6 feet. Additionally or alternatively, the height of the fence assembly tool **200** may be about 3 feet, or about 4 feet, or about 5 feet, or about 6 feet, or about 7 feet, or any height within any range defined by any of the foregoing values. Generally, the fence assembly tool **200** may be tall enough to assist in coupling the tallest cross member of a fence assembly to one

or more posts of the fence assembly. Additionally, or alternatively, the fence assembly tool **200** may be short enough for a person to comfortably carry (e.g., outside, for an extended period of time, and/or over long distances) when assembling fences, by themselves.

Referring specially to FIGS. 4 and 8, the base **208** is attached to the elongate body **204**. The base **208** may be integrally attached to the elongate body **204** and/or coupled to the elongate body **204**. For example, the base **208** may be welded to the elongate body **204**, molded with the elongate body **204**, coupled to the elongate body **204** via fasteners, adhesion, snappable attachments, threaded attachments, or any other type of attachment that may be recognized by those of ordinary skill in the art.

The base **208** may provide support and stability to the elongate body **204**, when the fence assembly tool **200** is in-use. The base **208** extends radially or laterally outward from the elongate body **204**. In some examples, the base **208** extends substantially orthogonally outward from the elongate body **204**. One or more peripheral edges **252** of the base **208** may define a perimeter of the base **208**. The perimeter of the base **208** may form a circle, a square, a rectangle, an oval, or any other shape.

Referring now to FIGS. 5-7, the strap **216** is shown in greater detail. The strap may be a cinch strap, a fabric strap, and/or a fabric strap with hook-and-loop fasteners (e.g., Velcro®). The strap **216** may be made of plastic (e.g., thermoplastic) and/or fabric (e.g., textile fibers). The strap **216** may be coupled to the elongate body **204**. For example, the strap **216** may extend through one or more of the brackets **212**. Additionally and/or alternatively, the strap may be fastened to the elongate body **204**, adhesively coupled to the elongate body **204**, and/or otherwise coupled to the elongate body **204**.

The strap **216** is configured to removably couple the elongate body **204** to a fence post (e.g., one of the plurality of fence posts **104**). For example, the strap **216** may extend from the first face **228** of the elongate body, across the third and fourth faces **236**, **240** of the elongate body **204**, and around a fence post that is adjacent to the second face **232** of the elongate body. Therefore, the strap **216** may be secured around both of the fence assembly tool **200** and a fence post, such as post **104** (FIG. 1), to provide a secure and stable coupling (e.g., temporary coupling) of the fence assembly tool **200** to the fence post. Accordingly, an individual may then couple one or more cross members (e.g., that are being held by the fence assembly tool **200**) to one or more fence posts and/or trim a cross member that is being stably held by the fence assembly tool **200**.

The elongate body **204** may include a first or upper half **256** and a second or lower half **260**. The strap **216** may be coupled to the upper half **256** of the elongate body **204**. Coupling the strap **216** to the upper half **256** of the elongate body **204** may improve stability of the tool **200** because the lower half **260** may be stabilized by the base **208** (e.g., friction between the base and a ground on which the base is disposed), while the upper half **256** is stabilized by the strap **216**.

FIGS. 9 and 10 illustrate the fence assembly tool **200** adjacent to another embodiment of a fence assembly tool **300**. In some aspects, the fence assembly tool **300** may be similar to the fence assembly tool **200**, with similar parts being discussed with similar reference numbers (e.g., incremented by a value of 100). For example, the fence assembly tool **300** includes an elongate body **304**, a base **308**, one or more brackets **312**, a plurality of holes **320**, one or more fasteners **324**, a first or front face **328**, a second or rear face

332, a third or right face 336, a fourth or left face 340, a flange 344, an elongate pocket 348, one or more peripheral edges 352, an upper half or portion 356, and a lower half or portion 360.

However, in some aspects, the fence assembly tool 300 differs from the fence assembly tool 200. For example, the fence assembly tool 300 includes a handle 364. Further, as shown in FIGS. 1-10, the one or more brackets 212 of the fence assembly tool 200 extend around the elongate body 202. However, the one or more brackets 312 of the fence assembly tool 300 are coupled in a fixed relationship to the first or front face 328 of the elongate body 302, such that outer edges of the brackets 312 are disposed between outer edges of the front face 328. Still further, while the base 208 of the fence assembly tool 200 is shown to be integrally formed or otherwise fixed with the elongate body 204, the base 308 of the fence assembly tool 300 is shown to be removably coupled to the elongate body 304 (e.g., via a pin, lock pin, fastener, etc.).

FIG. 11 illustrates the handle 364 of the fence assembly tool 300. The handle 364 extends upwardly from an upper end of the elongate body 304, opposite of the base 308. The handle 364 is attached to the elongate body 304. The handle 364 extends upwardly from the elongate body 304 in a direction that is substantially parallel to the elongate direction of the elongate body 304 (e.g., along an axis extending from the base 308 to the handle 364). The handle 364 may be texturized to improve a grip of a user who is holding the fence assembly tool 300, via the handle 364. Further, the handle 364 may be made of plastic and/or rubber. The handle 364 may be press fit onto the elongate body 304. Additionally, or alternatively, the handle 364 may be otherwise coupled to the elongate body, such as, for example, via molding, adhesive, fasteners, threading, snappable attachments, clips, buttons, etc.

A height of the fence assembly tool 300 is measured from the base 308 (e.g., a geometric center point of the base 308) to a point of the handle 364 that is furthest from the base 308. The height of the fence assembly tool 300 may be between about 4 feet and about 6 feet. Additionally or alternatively, the height of the fence assembly tool 300 may be about 3 feet, or about 4 feet, or about 5 feet, or about 6 feet, or about 7 feet, or any height within any range defined by any of the foregoing values. Generally, the fence assembly tool 300 may be tall enough to assist in coupling the tallest cross member of a fence assembly to one or more posts of the fence assembly. Additionally, or alternatively, the fence assembly tool 300 may be short enough for a person to comfortably carry (e.g., outside, for an extended period of time, and/or over long distances) when assembling fences, by themselves.

FIGS. 12-17 illustrates the bracket 212 of the fence assembly tool 200. As discussed earlier, bracket 212 defines flange 244. The bracket 212 also defines a bracket body 268 that includes a first or front bracket side or wall 272, a second or rear bracket side or wall 276, a third or right bracket side or wall 280, and a fourth or left bracket side or wall 284. The first bracket side 272, second bracket side 276, third bracket side 280, and fourth bracket side 284 define a channel 288 therebetween that is sized and configured to slidably receive the elongate body 204 of the fence assembly tool 200.

The third bracket side 280 and the fourth bracket side 284 may each include a pin hole 292 extending therethrough. The pin hole 292 may be configured to receive the one or more fasteners 224 (e.g., a pin, lock pin, bolt, screw, etc.). For example, one of the one or more fasteners 224 may be

slid through the pin hole 292 of the third bracket side 280 and through the pin hole 292 of the fourth bracket side 284. Therefore, the pin holes 292 of the third bracket side 280 and the fourth bracket side 284 may be concentric about an axis that extends through the center points of both of the pin holes 292.

The flange 244 may include a lower portion that extends outward, at an angle of about 45 degrees, from the front bracket side 272. In some examples, the flange 244 is a first flange, and the one or more brackets 212 further include a second flange 296. The second flange 296 extends orthogonally from the front bracket side 272 to the first flange 244. The second flange 296 provides structural support for the first flange 244 and also provides a flat surface at which a cross member of a fence assembly (e.g., fence assembly 100) may be received.

A width of the first flange 244 may be about the same as a width of the first bracket side 272. Alternatively, a width of the first flange 244 may be less than a width of the first bracket side 272. A height of the first flange 244 may be about three times a height of the first bracket side 272. Alternatively, a height of the first flange 244 may be greater than a height of the first bracket side 272. Additionally, or alternatively, a height of the first flange 244 may be greater than double the height of the first bracket side 272. Generally, the one or more brackets 212 are compact to securely and sturdily couple the first flange 244 to the elongate body 204 to define, in combination, the elongate pocket 248 that is configured and/or adapted to receive a cross member of a fence assembly (e.g., fence assembly 100).

Generally, as explained above, the present disclosure provides a fence assembly tool (e.g., fence assembly tool 200, 300). The fence assembly tool includes an elongate body and one or more brackets extending from the elongate body. Each of the one or more brackets are configured and/or adapted to receive one or more corresponding cross members of a fence assembly. In some examples, the fence assembly tool further includes a base. The base is attached to the elongate body. In some examples, the fence assembly tool further includes a handle. The handle extends from the elongate body. Further, in some examples, the fence assembly tool further includes a strap. The strap can be coupled to the elongate body, and the strap can be configured to removably couple the elongate body to a fence post.

Aspects of the fence assembly tool described herein provide the ability for a person to easily couple a cross member from a first fence post to a second fence post, by themselves. Further, aspects of the fence assembly tool provide a sturdy and stable structure for holding a cross member, such that the cross member can be easily trimmed by a person (e.g., with a saw, such as a hand saw), if needed, by themselves.

While this invention has been described as having exemplary designs, the present invention may be further modified within the spirit and scope of this disclosure. This application is therefore intended to cover any variations, uses, or adaptations of the invention using its general principles. Further, this application is intended to cover such departures from the present disclosure as come within known or customary practice in the art to which this invention pertains.

What is claimed is:

1. An assembly tool for a fence, comprising:
 - an elongate body;
 - a strap, the strap being coupled to the elongate body, and the strap being configured to removably couple the elongate body to a fence post;

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- a base, the base being attached to the elongate body; and one or more brackets extending from the elongate body, wherein each of the one or more brackets are sized and configured to receive a corresponding one of one or more cross members of a fence assembly.
2. The assembly tool of claim 1, wherein a height of each of the one or more brackets are adjustable, along the elongate body, with respect to the base.
3. The assembly tool of claim 1, wherein the elongate body is made from one of metal, wood, or plastic.
4. The assembly tool of claim 1, wherein the base is integrally attached to the elongate body.
5. The assembly tool of claim 1, wherein the one or more brackets are coupled to the elongate body, via one or more fasteners.
6. The assembly tool of claim 1, wherein the elongate body includes a plurality of holes extending therethrough, and wherein each of the plurality of holes are configured to receive one or more fasteners to secure the one or more brackets to the elongate body.
7. The assembly tool of claim 1, wherein the elongate body is substantially hollow.
8. The assembly tool of claim 1, wherein the one or more brackets comprise a plurality of brackets that are each adapted to receive a corresponding one of a plurality of cross member of a fence assembly.
9. The assembly tool of claim 1, wherein the elongate body includes a first face and a second face, the first face and the second facing being laterally opposed on the elongate body, and the one or more brackets each defining a flange that extends outward from the first face.
10. The assembly tool of claim 9, wherein each of the one or more flanges define, in combination with the elongate body, an elongate pocket.
11. The assembly tool of claim 1, wherein the strap is one of a cinch strap or a fabric strap with hook-and-loop fasteners.
12. The assembly tool of claim 1, further comprising a handle, the handle extending from the elongate body, opposite of the base.
13. The assembly tool of claim 12, wherein a height from the base to the handle is between about 4 feet and about 6 feet.
14. An assembly tool, comprising:
an elongate body;

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- a strap, the strap being coupled to the elongate body, and the strap being configured to removably couple the elongate body to a fence post; and
- one or more brackets extending from the elongate body, wherein each of the one or more brackets are adapted to receive a corresponding one of one or more cross members of a fence assembly.
15. The assembly tool of claim 14, wherein the strap is one of a cinch strap or a fabric strap with hook-and-loop fasteners.
16. The assembly tool of claim 14, further comprising:
a handle extending from the elongate body; and
a base attached to the elongate body, opposite of the handle.
17. The assembly tool of claim 16, wherein a height from the base to the handle is between about 4 feet and about 6 feet.
18. A method for assembling a fence, using an assembly tool, the assembly tool comprising an elongate body and one or more brackets extending from the elongate body, the one or more brackets defining, in combination with the elongate body, one or more elongate pockets that are each sized and configured to receive a corresponding cross member of one or more cross members of the fence, the method comprising:
coupling the assembly tool to a first fence post;
inserting a first end of a cross member of the one or more cross members into a first elongate pocket of the one or more elongate pockets;
coupling a second end of the cross member to a second fence post;
de-coupling the assembly tool from the first fence post;
and
coupling the first end of the cross member to the first fence post.
19. The method of claim 18, wherein the elongate body includes a first face and a second face, the first face and the second face being laterally opposed on the elongate body, and the one or more brackets each defining a flange that extends outward from the first face.
20. The method of claim 18, wherein the assembly tool further comprises a strap, wherein the strap is coupled to the elongate body, and wherein the assembly tool is coupled to the first fence post via the strap.

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